

ABSTRACT OF THE DISCLOSURE

A method of fabricating a semiconductor device having a ferroelectric capacitor includes the steps of forming a lower electrode layer of the  
5 ferroelectric capacitor on an insulation film covering an active device element, forming a ferroelectric film on the lower electrode layer as a capacitor insulation film, crystallizing the ferroelectric film by applying a thermal annealing process in an atmosphere  
10 containing a non-oxidizing gas and an oxidizing gas, and forming an upper electrode layer on the ferroelectric film.